

SEQUENCE LISTING

<110> Sanjay Bhanot
Kenneth W. Dobie

<120> MODULATION OF DIACYLGLYCEROL ACYLTRANSFERASE 2 EXPRESSION

<130> RTS-0678US

<160> 230

<210> 1
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 1
tccgtcatcg ctcctcaggg

20

<210> 2
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 2
gtgcgcgcga gccccgaaatc

20

<210> 3

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 3

atgcattctg cccccaagga

20

<210> 4

<211> 2439

<212> DNA

<213> H. sapiens

<220>

<220>

<221> CDS

<222> (231)...(1397)

<400> 4

ctccggaaac gccagcgccg cggctgccgc ctctgctggg gtctaggctg tttctctcgc 60

gccaccactg gcccgggcc gcagctccag gtgtccctagc cgcccaagcct cgacggcgtc 120

ccgggacccc tgtgctctgc gcgaagccct ggccccgggg gccggggcat gggccagggg 180

cgcggggtga agcggcttcc cgccggccg tgactggcgc ggcttcagcc atg aag 236

Met Lys

1

acc ctc ata gcc gcc tac tcc ggg gtc ctg cgc ggc gag cgt cag gcc 284

Thr Leu Ile Ala Ala Tyr Ser Gly Val Leu Arg Gly Glu Arg Gln Ala

5

10

15

gag gct gac cgg agc cag cgc tct cac gga gga cct gcg ctg tcg cgc 332

Glu Ala Asp Arg Ser Gln Arg Ser His Gly Gly Pro Ala Leu Ser Arg			
20	25	30	
			380
gag ggg tct ggg aga tgg ggc act gga tcc agc atc ctc tcc gcc ctc			
Glu Gly Ser Gly Arg Trp Gly Thr Gly Ser Ser Ile Leu Ser Ala Leu			
35	40	45	50
cag gac ctc ttc tct gtc acc tgg ctc aat agg tcc aag gtg gaa aag			428
Gln Asp Leu Phe Ser Val Thr Trp Leu Asn Arg Ser Lys Val Glu Lys			
55	60	65	
cag cta cag gtc atc tca gtg ctc cag tgg gtc ctg tcc ttc ctt gta			476
Gln Leu Gln Val Ile Ser Val Leu Gln Trp Val Leu Ser Phe Leu Val			
70	75	80	
ctg gga gtg gcc tgc agt gcc atc ctc atg tac ata ttc tgc act gat			524
Leu Gly Val Ala Cys Ser Ala Ile Leu Met Tyr Ile Phe Cys Thr Asp			
85	90	95	
tgc tgg ctc atc gct gtg ctc tac ttc act tgg ctg gtg ttt gac tgg			572
Cys Trp Leu Ile Ala Val Leu Tyr Phe Thr Trp Leu Val Phe Asp Trp			
100	105	110	
aac aca ccc aag aaa ggt ggc agg agg tca cag tgg gtc cga aac tgg			620
Asn Thr Pro Lys Lys Gly Gly Arg Arg Ser Gln Trp Val Arg Asn Trp			
115	120	125	130
gct gtg tgg cgc tac ttt cga gac tac ttt ccc atc cag ctg gtg aag			668
Ala Val Trp Arg Tyr Phe Arg Asp Tyr Phe Pro Ile Gln Leu Val Lys			
135	140	145	
aca cac aac ctg ctg acc acc agg aac tat atc ttt gga tac cac ccc			716
Thr His Asn Leu Leu Thr Thr Arg Asn Tyr Ile Phe Gly Tyr His Pro			
150	155	160	
cat ggt atc atg ggc ctg ggt gcc ttc tgc aac ttc agc aca gag gcc			764
His Gly Ile Met Gly Leu Gly Ala Phe Cys Asn Phe Ser Thr Glu Ala			
165	170	175	

aca gaa gtg agc aag aag ttc cca ggc ata cgg cct tac ctg gct aca 812
Thr Glu Val Ser Lys Lys Phe Pro Gly Ile Arg Pro Tyr Leu Ala Thr
180 185 190

ctg gca ggc aac ttc cga atg cct gtg ttg agg gag tac ctg atg tct 860
Leu Ala Gly Asn Phe Arg Met Pro Val Leu Arg Glu Tyr Leu Met Ser
195 200 205 210

gga ggt atc tgc cct gtc agc cgg gac acc ata gac tat ttg ctt tca 908
Gly Gly Ile Cys Pro Val Ser Arg Asp Thr Ile Asp Tyr Leu Leu Ser
215 220 225

aag aat ggg agt ggc aat gct atc atc atc gtg gtc ggg ggt gcg gct 956
Lys Asn Gly Ser Gly Asn Ala Ile Ile Val Val Gly Gly Ala Ala
230 235 240

gag tct ctg agc tcc atg cct ggc aag aat gca gtc acc ctg cgg aac 1004
Glu Ser Leu Ser Ser Met Pro Gly Lys Asn Ala Val Thr Leu Arg Asn
245 250 255

cgc aag ggc ttt gtg aaa ctg gcc ctg cgt cat gga gct gac ctg gtt 1052
Arg Lys Gly Phe Val Lys Leu Ala Leu Arg His Gly Ala Asp Leu Val
260 265 270

ccc atc tac tcc ttt gga gag aat gaa gtg tac aag cag gtg atc ttc 1100
Pro Ile Tyr Ser Phe Gly Glu Asn Glu Val Tyr Lys Gln Val Ile Phe
275 280 285 290

gag gag ggc tcc tgg ggc cga tgg gtc cag aag aag ttc cag aaa tac 1148
Glu Glu Gly Ser Trp Gly Arg Trp Val Gln Lys Lys Phe Gln Lys Tyr
295 300 305

att ggt ttc gcc cca tgc atc ttc cat ggt cga ggc ctc ttc tcc tcc 1196
Ile Gly Phe Ala Pro Cys Ile Phe His Gly Arg Gly Leu Phe Ser Ser
310 315 320

gac acc tgg ggg ctg gtg ccc tac tcc aag ccc atc acc act gtt gtg 1244
Asp Thr Trp Gly Leu Val Pro Tyr Ser Lys Pro Ile Thr Thr Val Val
325 330 335

gga gag ccc atc acc atc ccc aag ctg gag cac cca acc cag caa gac 1292
Gly Glu Pro Ile Thr Ile Pro Lys Leu Glu His Pro Thr Gln Gln Asp
340 345 350

atc gac ctg tac cac acc atg tac atg gag gcc ctg gtg aag ctc ttc 1340
Ile Asp Leu Tyr His Thr Met Tyr Met Glu Ala Leu Val Lys Leu Phe
355 360 365 370

gac aag cac aag acc aag ttc ggc ctc ccg gag act gag gtc ctg gag 1388
Asp Lys His Lys Thr Lys Phe Gly Leu Pro Glu Thr Glu Val Leu Glu
375 380 385

gtg aac tga gccagccttc gggccaact ccctggagga accagctgca aatcacttt 1447
Val Asn

ttgctctgta aatttggaaag tgtcatgggt gtctgtgggt tatttaaaag aaattataac 1507

aattttgcta aaccattaca atgttaggtc ttttttaaga aggaaaaagt cagtattca 1567

agttcttca cttccagctt gcctgttct aggtggtggc taaatctggg cctaatctgg 1627

gtggctcagc taacctctct tctcccttc ctgaagtgac aaaggaaact cagtcttctt 1687

gggagaagaag gattgccatt agtgacttgg accagttaga tgattcactt tttgccccta 1747

gggatgagag gcaaagcca cttctatac aagcccttt attgccacta ccccacgctc 1807

gtctagtcct gaaaactgcag gaccagtttc tctgccaagg ggaggagttg gagagcacag 1867

ttgccccgtt gtgtgagggc agtagtaggc atctggaatg ctccagttt atctcccttc 1927

tgccacccct acctcacccc tagtcactca tatcgagcc tggactggcc tccaggatga 1987

ggatgggggt ggcaatgaca ccctgcaggg gaaaggactg ccccccattgc accattgcag 2047

ggaggatgcc gccaccatga gctaggtgga gtaactgggt tttcttgggt ggctgatgac 2107

atggatgcag cacagactca gccttggcct ggagcacatg cttactggtg gcctcagttt 2167

accttccccca gatcctagat tctggatgtg aggaagagat ccctttcag aaggggcctg 2227

gccttctgag cagcagatta gttccaaagc aggtggcccc cgaacccaag cctcacttt 2287

ctgtgccttc ctgaggggggt tggccgggg aggaaaccca acccttcct gtgtgttctg 2347

ttatctcttg atgagatcat tgcaccatgt cagactttg tatatgcctt gaaaataaat 2407

gaaagtgaga atccaaaaaaaaaaaaaa aa 2439

<210> 5

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 5

catacggcct tacctggcta ca 22

<210> 6

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 6

cagacatcag gtactccctc aaca 24

<210> 7

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Probe

<400> 7

tggcaggcaa cttccgaatg cc

22

<210> 8

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 8

gaaggtgaag gtcggagtc

19

<210> 9

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 9

gaagatggtg atgggatttc

20

<210> 10

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Probe

<400> 10

caagcttccc gttctcagcc

20

<210> 11

<211> 2262

<212> DNA

<213> M. musculus

<220>

<220>

<221> CDS

<222> (207) . . . (1373)

<400> 11

ggtgccgcg cttcgctggc tttctgctca tctagggtgg cagcggctac ctacctcagc

60

tctcgccctg ctgccgcac ggctggcg ctgtccctca gctcccgag ctcagcgcga

120

agccctggcc ccggcggccg gggcatgggt cagggcgcg gcgtgaggcg gctttctgca

180

cggccgtgac gtgcattggc ttcaagc atg aag acc ctc atc gcc gcc tac tcc

233

Met Lys Thr Leu Ile Ala Ala Tyr Ser

1

5

ggg gtc ctg cgg ggt gag cgt cgg gcg gaa gct gcc cgc agc gaa aac

281

Gly Val Leu Arg Gly Glu Arg Arg Ala Glu Ala Ala Arg Ser Glu Asn

10

15

20

25

aag aat aaa gga tct gcc ctg tca cgc gag ggg tct ggg cga tgg ggc

329

Lys Asn Lys Gly Ser Ala Leu Ser Arg Glu Gly Ser Gly Arg Trp Gly
30 35 40

act ggc tcc agc atc ctc tca gcc ctc caa gac atc ttc tct gtc acc 377
Thr Gly Ser Ser Ile Leu Ser Ala Leu Gln Asp Ile Phe Ser Val Thr
45 50 55

tgg ctc aac aga tct aag gtg gaa aaa cag ctg cag gtc atc tca gta 425
Trp Leu Asn Arg Ser Lys Val Glu Lys Gln Leu Gln Val Ile Ser Val
60 65 70

cta caa tgg gtc cta tcc ttc ctg gtg cta gga gtg gcc tgc agt gtc 473
Leu Gln Trp Val Leu Ser Phe Leu Val Leu Gly Val Ala Cys Ser Val
75 80 85

atc ctc atg tac acc ttc tgc aca gac tgc tgg ctg ata gct gtg ctc 521
Ile Leu Met Tyr Thr Phe Cys Thr Asp Cys Trp Leu Ile Ala Val Leu
90 95 100 105

tac ttc acc tgg ctg gca ttt gac tgg aac acg ccc aag aaa ggt ggc 569
Tyr Phe Thr Trp Leu Ala Phe Asp Trp Asn Thr Pro Lys Lys Gly Gly
110 115 120

agg aga tcg cag tgg gtg cga aac tgg gcc gtg tgg cgc tac ttc cga 617
Arg Arg Ser Gln Trp Val Arg Asn Trp Ala Val Trp Arg Tyr Phe Arg
125 130 135

gac tac ttt ccc atc cag ctg gtg aag aca cac aac ctg ctg acc acc 665
Asp Tyr Phe Pro Ile Gln Leu Val Lys Thr His Asn Leu Leu Thr Thr
140 145 150

agg aac tat atc ttt gga tac cac ccc cat ggc atc atg ggc ctg ggt 713
Arg Asn Tyr Ile Phe Gly Tyr His Pro His Gly Ile Met Gly Leu Gly
155 160 165

gcc ttc tgt aac ttc agc aca gag gct act gaa gtc agc aag aag ttt 761
Ala Phe Cys Asn Phe Ser Thr Glu Ala Thr Glu Val Ser Lys Lys Phe
170 175 180 185

cct ggc ata agg ccc tat ttg gct acg ttg gct ggt aac ttc cgg atg 809
Pro Gly Ile Arg Pro Tyr Leu Ala Thr Leu Ala Gly Asn Phe Arg Met
190 195 200

cct gtg ctt cgc gag tac ctg atg tct gga ggc atc tgc cct gtc aac 857
Pro Val Leu Arg Glu Tyr Leu Met Ser Gly Gly Ile Cys Pro Val Asn
205 210 215

cga gac acc ata gac tac ttg ctc tcc aag aat ggg agt ggc aat gct 905
Arg Asp Thr Ile Asp Tyr Leu Leu Ser Lys Asn Gly Ser Gly Asn Ala
220 225 230

atc atc atc gtg gtg gga ggt gca gct gag tcc ctg agc tcc atg cct 953
Ile Ile Ile Val Val Gly Gly Ala Ala Glu Ser Leu Ser Ser Met Pro
235 240 245

ggc aag aac gca gtc acc ctg aag aac cgc aaa ggc ttt gtg aag ctg 1001
Gly Lys Asn Ala Val Thr Leu Lys Asn Arg Lys Gly Phe Val Lys Leu
250 255 260 265

gcc ctg cgc cat gga gct gat ctg gtt ccc act tat tcc ttt gga gag 1049
Ala Leu Arg His Gly Ala Asp Leu Val Pro Thr Tyr Ser Phe Gly Glu
270 275 280

aat gag gta tac aag cag gtg atc ttt gag gag ggt tcc tgg ggc cga 1097
Asn Glu Val Tyr Lys Gln Val Ile Phe Glu Glu Gly Ser Trp Gly Arg
285 290 295

tgg gtc cag aag aag ttc cag aag tat att ggt ttc gcc ccc tgc atc 1145
Trp Val Gln Lys Lys Phe Gln Lys Tyr Ile Gly Phe Ala Pro Cys Ile
300 305 310

ttc cat ggc cga ggc ctc ttc tcc tct gac acc tgg ggg ctg gtg ccc 1193
Phe His Gly Arg Gly Leu Phe Ser Ser Asp Thr Trp Gly Leu Val Pro
315 320 325

tac tcc aag ccc atc acc acc gtc gtg ggg gag ccc atc act gtc ccc 1241
Tyr Ser Lys Pro Ile Thr Thr Val Val Gly Glu Pro Ile Thr Val Pro
330 335 340 345

aag ctg gag cac ccg acc cag aaa gac atc gac ctg tac cat gcc atg 1289
Lys Leu Glu His Pro Thr Gln Lys Asp Ile Asp Leu Tyr His Ala Met
350 355 360

tac atg gag gcc ctg gtg aag ctc ttt gac aat cac aag acc aaa ttt 1337
Tyr Met Glu Ala Leu Val Lys Leu Phe Asp Asn His Lys Thr Lys Phe
365 370 375

ggc ctt cca gag act gag gtg ctg gag gtg aac tga cccagccctc 1383
Gly Leu Pro Glu Thr Glu Val Leu Glu Val Asn
380 385

gcgtgccagc tcctgggagg gacgactgca gatcctttc taccgagttc ttgagtgcatt 1443

tttggcttgt aaatttgaa gcgtcatgg tgtctgtgg ttataaaaa gaaattataa 1503

tgtgttaaac cattgcaatg ttagatgttt ttttaagaag ggaagagtca gtatttaag 1563

ctcacttcta gtgtgtcctg ctcaaggtgg aggctgatat ttatggcct tggtggttc 1623

ttacccaccc cttctagcgt tccccagacg acagacactt ggccctggct agctggcaa 1683

ggcagtcct tagtgactcc agggattctt gagaggcaga ggccatgtcc caccgtggc 1743

tgcaggtcggtt ccaaggggag gctgagggca cagctggccc cacttggga 1803

ggtagataa catctggact gcccggctt ggtctctgct cctcacccta gcccctttct 1863

ccaatctgag cctaccctgg cctcctgtct cctggctagg gacacggctg tcccacaggt 1923

gccgtcttgg gttatctcgc tgctgtggc tggtttact ctggagggttg gcaccatgg 1983

cacagctcag cgttgctctg ggcataatcc tcctgagcca caccccaagt ctgggtgag 2043

gaaggggcttc tcttctttc acagaggtgc ctggcttcct gtgcagcaca ctgggtccag 2103

gacaggaggc cccccccca aaccaaggcct cacgtgtgtg cctttatgag gcgttggag 2163

aaagctaccc tcctgttat tctgtttct ccatgagatt gttgtgccat gtcacactt 2223

tgtatattcc tagactaata aatggaaaca agaacagcc 2262

<210> 12

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 12

actctggagg ttggcaccat

20

<210> 13

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 13

gggtgtggct caggaggat

19

<210> 14

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Probe

<400> 14

cagcgttgct ctggcgca

18

<210> 15

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 15

ggcaaattca acggcacagt

20

<210> 16

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 16

gggtctcgct cctggaagat

20

<210> 17

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Probe

<400> 17

aaggccgaga atgggaagct tgtcatc

27

<210> 18

<211> 42823

<212> DNA

<213> H. sapiens

<220>

<400> 18

atgaaaactg ttgcttctcc tttggaaaa atcaggatgg cactagccca cctccagtct 1560
cccaacgctt ctccagctga acagcatttc ctagagatta cagattctgt aatctgcagg 1620
ttctctgaga tgcagttgga acaaatttaat acagcagagc agtcccattgc tccactgttag 1680
tctcaactgca aaacagttca gcagcggttc tcaaaatgtg ggcttcaaacc tagcagtatc 1740
agcatgtcct gggacttgt tagaaatgca cattctcagc ctcactccag aacctactga 1800
atcagaaaact ctgggggtgg aaccaggaaa gctataatttt aaccagccct ctgctaattgt 1860
ttgaaaactg ccacagcata ttatagcaca gtggtttatt taggtagata tggcgcagtt 1920
cattgccac tccttctcca caaagtgttc ctgattcccc cagaaccctc ttttactaac 1980
agctctaact tcctccctgt attactgttgc tccatgctca aaagtgctca atcctccctg 2040
gattacaggt tacctgagag cagtgttggg tcttacacat ctctgcactg ggcagccag 2100
gggctgccac agggacctt gcttaggaaa gacatgtga gtcaagcgtg caacatttcc 2160
agtttcctct gactaaggct actattactg agcctctgct cttccagga cccttgctca 2220
tactgcattt tccttgtga attgtgtca tctcctatgc taagatgcct ggttcttgc 2280
catttctagt atcctccagt tccactgcct tctcaggcat ttactcttc tccctccctt 2340
tatgtttgtt caaagccctt tggagaaggt gtcagagctc caggcaaacc tgtcaccccta 2400
atccttattt tcaatcataa tacttctact ggtaacaatt tgtcaagtac tatatgccag 2460
gccctgtact gggcattta cattcattca ttcatttact tagagacagg gtgtctct 2520
gctgcccagg ctgcagcgcata gtagctcac tgccgcctct aactcctgga 2580
ctcaagcaat cctccctcc ccctaccttgc gcctcctacg tagctggac tacagacaca 2640
tgccaccatg cctaggtaat ttttttttt tggtagaga tgggtctgt ctgtgttgcc 2700
caggctggc ttcaactcctt gggctcaaatt gatcctcatg cctcagcatc ccaaagtact 2760
gagattacag gcatgagcca ttgtgcccattt atggcactttt acatttattttttttagtctt 2820
tacaacaacc ctaggaggaa gatacctatt cccatttggaa tggagcacag ggaaactgag 2880
gctcaaacac agtaagcaac attaacatgt ggcaagggtgg gggcttatttc agtctggggc 2940
caagtcaggg tctgggtggaa tggaccagga gaagggcattt gtctaggcat atgtattcat 3000
ataaaaaatga tccaccaaca aacctgtcca gtcccttgc tcaggaagat gggcttgacc 3060
aggtgccagc ccaccagggt gccttccac agtgtgcagg gggcatccac ctgaatgccc 3120
gtcttcagtgcatccctgg ccctgcactt gctattctgt gcagcaggag tttcaactgt 3180
tgttccacag agccctggag atagggtgtg tggctggc aagtgagaga caaaccctga 3240
ggaactgtgg gaccacccca gcagcctgtc atccctgtca ctcttggc tctcaagggtt 3300
gtatttgaag aaatgatttc agctggcgc ggtggctcac gcctgtatcc ccagcgcttt 3360
gggaggttga gatggccgga tcacgaggc aggagcttga gaccatcttgc gctaacatgg 3420
caaaacctcg tctctaaaaaa tacaaaaaaaaaa aaattagctg gatgtggtgg cgggcgcctg 3480
tagtcccagc tacttggag gctgaggcag gagaatggcg tgaacccggg aggtggagct 3540
tgttagtgagc cgagattgtg ccactgcact ccagcctggg cgacagaacg agactccgtc 3600
tcaaaaaaaaaaaa aaaaaagaaaaaa aaagaaaaaaaaaa agaaatggttt tcactgctttt taaaaagcta 3660
gaaactactg ctgaataata attgtcattt taggtgtctg tttctccccc cagaatgccc 3720
ctaaggagca agaactgtac ccacagcacc cagcacaagg atgggggttc tcagggaaagg 3780
tcggccagat agaagggcag atgagaaatg aatgtactgg gagctctctg tgtaatatcc 3840

cctcccccac cctcaccaca cccccaatt cctgcaggga agaggccttg agagagttga 3900
gtaagaaata agcaggcaga atgatgcaag gggagctgtc tgtacacatt gcaacagaac 3960
tttctaaaac aagcctgggg ctgctccaa gggtctcagt cctgccctat tcctctactg 4020
tcatccagac ctgtcacaca agatagggcc aaaggccatt accaagctct gctaaggcct 4080
gaccttagag ctgggagggtc tggctcttg gggtctgggt tgaaacccgg agccatctc 4140
aatcaccccc ttcccttcctt tcagccctac atccatgcca tcaaattccta gagactctaa 4200
agcttcagca tctctaaaa tcaccctcgc ttctcttttgc cttgccacc cttcagttc 4260
aggctctgtc gtcattatct ctctccttcc tctcatctgc ctccctccct tccatccaat 4320
atcacccagg tccctgtggg ttgtctgtc cccttcagca aaggccacag ctccatgtg 4380
gcagccctct ccgctcagcc cccattgcac ctgcagtgac ctctcttag tccttcaggc 4440
cagatccccgt gtgagggtgac tagtcctggg ctactgcacc atccctttag ttttcttat 4500
agcctgctta catctttgca aacagtctt gtattaaact gtcctcaaatt tacccagttt 4560
gggtgggctg tttcccatag ggacactgac taatataagg tagaggttagt taggaagggt 4620
gccatggaga tgacagttaa agatgttctt gcctggacaa tggatctttctt aaagcataaa 4680
actcctgcta aaaacctcta tggctccca ttggccctgag aataaaagtcc agactctgta 4740
gcctgccacc caagactata taccatcagg cccctgacca caaagcagca gcagcatgtg 4800
gggaagccac caggaagagg gagagtaggg ggcttggacg tggaggcggaa agacttccaa 4860
gaggagtgca gccatgccac acagctgctc tggctggcaa attcctgtga gtaaggaggc 4920
gggtgagttt ccaggctaga gggccatgccc aggctgcctc tgcttgccag aaccctgccc 4980
gcccactctc caagtgagtt gggactgaa aggagttaa ccccaatggg ccctagcctt 5040
gtggcatgag aactggttac atcccaaccc catctggtaa gctattggat tccctgagct 5100
ttcattttgc caactgcaaa atggactaa cctcccaagg ctgtggaggc gatggatggg 5160
aatttgctt cgtccagtag ttctgctgtt acaggtgctc cctctcccg cttgggagg 5220
cagaaaaagc gtacagggtt gaggctctgg aagacttggt gtgaatctca gcttactac 5280
ttactccttg tgtgatccag gacaagtcac tttacttccc tgaccccat gtgcaaagcg 5340
gtgggggtga tcacccttg tgtgggtgt gtgaggactg ggcaagctca cacaagccag 5400
ggcttagcacc agagcaggaa gcttgataca cgtttggatc tgtctttcta cctgtgcctc 5460
tcttagggca agtgtcctct ctgccttata ggctggccac ttaccctcct catgtgtgca 5520
atggaggaggc taagactgct atcaactgaag catatctcag aggtgcacgtc gtcaaaccctc 5580
tcacaagctca caaagctgca cgttaatcc ccaatggctg tacaacactg gtgattgaag 5640
tgggtggagg atgagccatc cttgtggatg cctctctgct cacacccctc ctttggtcca 5700
tcccccaaca ggtgaagtc caagcttctt ggtggacca caaagccac cctggtcaag 5760
ccctcttgg aggcatgact tgaccggctc ctgattttcc caatatacac atgggttgag 5820
agatgatgaa ggaaaggtaa ccaggtccta gaacacattc tcaagctgtt ctgctcacac 5880
acctgcagga aggtcaggc tggcattat aggaggctag gaatgtcaag aagcatggga 5940
ggggccagg agaagtcaga gtctgggtga agtccccctt gcccaaactc acacagggga 6000
aaacagtccc aggacacagg aagctgccat gaaacttccct ttccaggctt ctctaagttt 6060
gggtctgggtt ttcccttccaa atccaatttg gaccaagctg tttaaggcagt acccatgggc 6120
atggcggctg gaggccaagg ggaaggagtg ttctagaagt tggatgcca ggggctgctt 6180

gctctgtgag gtggcacaga agtaagcaat tgcgcctc agcccttgg 6240
cgtcctctca cagatgttcc cacacaggaa gggcccaagc tggggaccag attttatggc 6300
cctattcccc aagcaccac ctccacccca acaaccacgc ttatcttc 6360
ttttttgag tcggctctc tcgcccaggc taccaggctg gagtgca 6420
ggctcaactgc aagctccatc tcctgggttc acgccattct ctgcctc 6480
agctggact acaggcacct gccaacacgc ctggctaatt tttgtat 6540
gaggtttcac cgtgttagcc agatggctc cgatctactg acctcg 6600
cggcctcccg aagtgctggg attacaggcg taagccaccc cgctgggccc 6660
ttctaaacca ccaatccat caaggtgc 6720
ccccacagga tgaagtccaa gcttcctggc aggaccacg aggccgtca 6780
ctgtcaacct ctccagc 6840
caccagggtg ctcacagggt tcctac 6900
gacaccc 6960
aatatca 7020
ctatacttt tcaggggca atccac 7080
actggacat agagt 7140
aggcagacag tgacagcaca gggggaaagg ccaaacttgg catagc 7200
tgtgccacag gctggctgc ttggatcat tggctttagg acaccatctc 7260
ctcctcaaag ccaaggacta agtccgatta ctctctgtgt cctaacc 7320
gagaaggtgc atagaaaaa tgtgt 7380
taggccttgg taacccaaa tctgccatt taagacaatg atctttaca 7440
gtgataacac tctttacat gctgtgatt cacttc 7500
agcaaaacag aaactgtc 7560
gca 7620
acaggagacc cttctggagc aggcac 7680
caggagtctt gcctcaaga gcacc 7740
cttc 7800
ctcc 7860
ca 7920
cacatgctgg gagctg 7980
ggggcc 8040
gaagcatctc taggttgcac cagaggcatc tattac 8100
tgtcattctc ctctcc 8160
tcctt 8220
atca 8280
accacatgctt ggtggatctc gcttc 8340
ccctctacca ctgccgtgc ttgaggctca tcctctc 8400
agcctccca ctgccctc 8460
aggacactta aaacccac 8520

tcccccccaa tatctcaaga gtggcactcc caaacctctc tcagttcaag caccgcgcc 8580
tctcacttca gcctcatttt ccacagttgc ctgggctcca gccactccag ggcccccagc 8640
cctgccccaa acatgctggc tttctaaca ctttatgcct atctttctgc tttgcctca 8700
cacttccat ctgcaaaatt cctattcatt aatgggaaa ccattctgga atgcttctta 8760
tgtgccagac actacctagg ctcttttat accttatctc atttacttct caaagtacct 8820
cacaaaaata ataattatta ttcccatttt acagatatgg aaactgaggg tcaagagagg 8880
cagggcaaga actggactcc tagtctatct gattccaaac ctgctgtgca ccaacctctc 8940
tgggaagtgc accagcgccc ccactcccc agcccaggc agagtcttct ctactctgtg 9000
gttccatagc cccctggttt ctcgcttgc ccggccgtt tcaccagtga ctgtgtgcgg 9060
ctgtctctgc tgccccccag cgtgagcatc ccaagggcag aacctgggct gatctggctg 9120
ggtccccagc acccagcagg gtataggtg tctgtgaggt ttcttaataa agagatggaa 9180
agccagaagc agtttgggtg gttgagatac ccagccctaa cctaactaat cctgatacca 9240
gtgaccaaaa gcgggacctt cgcatcttg ctgccaaaag acagccctc ctaaagagta 9300
aaggccccac cccctgcacg ccctctgcct gcaccgcacg tgcttggttt tcccccccg 9360
ggtactggcc gcccggccgt accaatctcc gcgggggagc gccgggggtc ggactgaggg 9420
agcgagggga ataaccgggc gcgccttg gaagcaggc tcagagctgc ttcctctca 9480
cgcatccccc ggatccgcgc ggagcaggct gctggccagc cccgggcccgc cgccaagcag 9540
agcctcaggt gcggttcccc cacaagcaag tggcgccggc ggcggcttag aacggccgc 9600
cccgccccccgc gcgtcgccgc ctgccccgtt gtgaggtgat aaagtgttgc gtcggggac 9660
gccagcgccg cggctgcgc ctctgctggg gtctaggctg tttctctcgc gccaccactg 9720
gccggccggcc gcagctccag gtgccttagc cgcccagcct cgacgcgcgc ccgggacccc 9780
tgtgctctgc gcgaaggcct ggccccgggg gccggggcat ggccagggg cgccgggtga 9840
agcggcttcc cgccggcccg tgactggcg ggcttcagcc atgaagaccc tcataggccgc 9900
ctactccggg gtcctgcgcg gcgagcgtca ggccgaggct gaccggagcc agcgctctca 9960
cgaggacact gcgctgtcgc gcgaggggtc tggagatgg ggtgagtgcc acggcgcagg 10020
ggttatggac ctgcgagaag atttctgga aaggccctg tggcaggctg gtgggtactg 10080
atgagtccac gttcattctc cactgtggca ctcatcaatt ttacgacact ctgttacatc 10140
gctttccacc cgccccccag cttgttccc tcatccgtga ggtggagcgc gtaccaccca 10200
ccattcttag ttatttaggaa tattcgagaa ctccctccca gccccactg cggctggta 10260
ccccctggcac ttccctcccc tcccttca ccaggttagag cgagctttgg cagtgataga 10320
ctggatggc agatggat gggtttgcc gtctcctgag acagccacca gacgggaac 10380
atgcccact ggaacaggtg tgtctccct gtcctctgac ccacatccat cctctgcggc 10440
aggctctgga gcccacatag cagcaactct tgagcctggc atgcttagaa ggcagcggag 10500
aggaccctgc atgtcctcca aggtagaact gaggtcctca gtgaatcgcg cagagttgaa 10560
atcaaccccc gccccgcacc cccgcagct tttccaaagc gagaaatagc aactcttcca 10620
accccccaccc ctcttaccta gagctggaga aactgaagtggaggaagca tgcctaa 10680
ttccttagct gatgccttga cccctggatt caagtacaaa tccggtagac cctggaa 10740
catcacagct gtcctggct gcgtgtgtgt ctgcattgaa gcccctctcc ctcttctaa 10800
gtctgtattc tgtttgctga gcctctctga catggatttt tcttttagtaa ctaacggcgtc 10860

cctacaccgc ccacctttgt tacaaaaata aagcttgcta attatggaaat ttttggaaaat 10920
atagacaaat gaaaaaaatt tctggtaaat cgactatcca aagatacctt cctattagca 10980
tttttagtata tctcttgatc attttcttta tacacattgc atagatacaa ttgaggacat 11040
gctgttagata tagttatgaa tcttggtttc tcccccttaa tgtaacatcg aggtttccct 11100
tctgttaatc agaatcactt acaatgtcct agtgggtgca ataaccacc ctgcagctgt 11160
accacacttt aactgtgacc taggcattgg cattgcttct tgtgtgatta tcgctgtggt 11220
tatctgcccc tcttgggtgt ggtgctgctc gtagcccttg aagaggaacc cagctgctgc 11280
cctgtctcg gggcgagcag cttgagctgc cccatgtatc cagccagtag cctctgacag 11340
ccccttctct cacttgagtc ctttctgtt ccctgtgtcc tttgatgtcc ttagggacat 11400
caatggatga atggacttgc ctttggatcat gctgttaaaa atgttttgc actgggcagt 11460
gggatagggg ttttctctgt ggttagtgctt cctggagacc ccattccgtc ggctctgcc 11520
tccacaggct gggagctgtg tcttccagga ggcagtgacc ctggctgtca tggtttgac 11580
tttagagttt ttccttagga gaacttgtac tctagcgaat ggttttaacc aagccactta 11640
atatcatgtc aggaacattt cccatgttg ttatcagatc ttgaaaactt tttttttt 11700
aaactgggtg caaggattta catcatggaa ttaggaagg gctggatgaa aatgcaaacc 11760
agtcagttca gctttctggg atctactttg gtgaaagatt gggtaggtt ggggagggca 11820
ctgaagcaca ttttggatcatc tggcatctc cattagacct gccttctaga tccttggtcc 11880
ttgaagatac tccccagtggt cctagttgc ctctgtgggt aaggtcccac tggttgagc 11940
tggtaacag cccgtcagtg acagtattca agtagagacc atggattctg tgaaggaaag 12000
tcctgtgacg ggtgagagat tgaaatagat accttggcat ctggtttctt ggccaaaaaa 12060
aaaggccagc tggggaggtt tggtaggtt ggtgcatgct gggggaaagcg ggagtctgt 12120
ttgatatttc ctaatcctt gggctgtc ctgtgccaga cgtggagttt gcagagttca 12180
tcaggacagg agggatatat atcctattct ttatccttgc ctggatttggg gggctcttc 12240
gttcagaaga gccctctgac acctgcctgt gtcctcaggg ttacgacac gacctagcat 12300
gagatgttgg tggcccagt aaaatttga gctgattgt tggatggc tccaaagagt 12360
gaggccagga ataggagtgg gatgatgggt gcaagtttgc atgttagcaga ggagtcc 12420
ctgacagctg ttgaggactg caacaggctg ggggtggta ggtggagtt ccacatca 12480
gtggatctgc ttgaaactaa gtggctagat tggatgggtt aactggaaac tgagggtt 12540
cagtcaccta acctagtcc aagtcagaat gagaacatta ctctcatgct tcctctcca 12600
attccgtgt gctcccccc tcacccatcat cacttccccca gctgaataga ggccacttt 12660
gggctgcgtc accaagggtt catctaggct gagaaaggag ggccaaagagt aatgttgtat 12720
taacaggctc agtgactcaa tggctagtgt tgaaatcctt ccccacctcc accctctgc 12780
cctcaaattc aacagcaagt acttgagttg taaaaatttgc tgctggatcg ggccaaaccc 12840
tcatgttaca gatggatca ctggagtctc cagaaagaag ggactttccc agggttatca 12900
aagccaggct agaactcaga tccatctccc agtctgtggc ctgactcctt aagccaaagag 12960
aagggttgca aggccgtgaa gggctgagtg cagggtctgt tgcatgttag gtgctcgt 13020
gtttgctgaa tgagtgaagg ttgtctccat ggtgcgggtg gcagctcatc cttctcaaa 13080
ctttttgagg aagctccccca agcctgcctt agtggatttag agcactaaga tccccccagag 13140
ctttggctgc caggtgaatg ccagttgccc cctaccacca ctcagtcaca cttcagactt 13200

tccaaactct tcctcctggc ctatgaagta agccccaggt gaacagcctc cactgccatc 13260
acgacttcct ctcctagtat gtcacccacc atgctgcaga cgcattggtgg tcttcctgtt 13320
cctgcagcat tactcccaat tcagtcctac ctcagcgcct ttgcataatgc tgcctgtctg 13380
cccaggtctt cgcatggctg gctttacaac agtcaatctc ctctcagagg tcttcctgg 13440
ccaccctatc tagagagcca cttccaatct agagagccac ttccaaatcac cacatcttct 13500
tttattttta tagcctttat cactacctaa attttcatgc gtgcttatct gtttaagcaa 13560
ttgtctcccc agtaagaata tcagtcctt tgccggccgc gtgcattggc ttgcctgt 13620
aatcccagca ctttgggagg ccaaagtggg aggatcaett gaggtcagga gttcgagacc 13680
agcctggctg acatggtaaa acccctgtct ctactaaaaaaa taaaaaaaaaatt tagccaggtg 13740
tggtggtgtg tgcctgtaat cccagctact tgggaggctg aggcaggata gtcgcttcaa 13800
cccagggagga ggaggttaca gtgagccaag gttgtgtac tgcactccag cgtggtaac 13860
agagcgagac tccatctcaa aacaaaacaa aaagaacaaa cagaaaaaaga atatgagtcc 13920
cttggaaaca ggaaccttgc ctgtctttct cagtgcgtg acatcttagca cagtgcctgg 13980
cactggtaat aggtacttag taagtatctg ttaaaacaag gaatcattag tggactgcc 14040
ccattccctc tggaggaagc cctgctttta gcttcagtgt gattcctcgaa gccttcctt 14100
ggcctccctc gtccctgtaa ccacctgtgc tagggactgg gtgctggggt ttagtgcgtt 14160
ccctgcccctg gaggtaccca cagtctggca aggagctggc tccaaggctg agtggcaagt 14220
gggcagagcc agtctcaatg gtcaccctta ctgctttccaa gggcttattaa gaagccccgag 14280
agctggggtt ccaggcctga cattttctg ggatgtggct gggggcttca cttccctct 14340
ggggatctca ctccttctat ctggaaaata gggtcagaat tctcagattc tcaaggatgg 14400
agggttttag ttaacctgag tgtgagtgtt tgtgaacttg tgacattcat gttagtcctt 14460
gtcatttgta cttgcgttaca cattcagcag gcccccaaca ctgtagagag tggcagaccc 14520
tgctctaggg catccaggaa ggcttcactg aggaagggac ttgggggtgtg gacccttcatt 14580
tttattgatt gagcacccctc tgtgtgtcag ctgcagtccc tgcgttttag gaaatggagac 14640
cagggggatg tacacaagat gactgtgcag agtgcattgtc gcaatgcac gaaagactgc 14700
caagaggtga gaccggggag cttgatcacc ctgaggtcag ggaagtcttc ctggaaagagg 14760
tgacattcag tccggatctg gaaagatgaa tagacatcag caagacaggc aagaacattc 14820
aggtacagga aatagcataa atagaggcat gagatttggaa tggagggagc agactgactg 14880
cagggcctct gagtgaccaa ctgaggctga ggtcttgggt tactgagagc cagagacaag 14940
agagacagag aggtgcctgg atccaggccct gtgggtgcctc acctgtgtct gcagcaggag 15000
gaagacttga gagctcatgg gaaaggagcc tgggtcagtt agtttattgg cctccagcac 15060
tttggggcc tcctggatcg gagctgtgg ctgattttag ggcctcatgg gcagggccca 15120
ggggtaggag tcaggcctgg gctctgtcca gctcctgctt ggcacccgaa ctgctccgca 15180
gcctcagcaa gccactaccc ttccttaccc tcagtcctt catctatgaa atgagcaaaa 15240
gtgtcataag aacctgtgca gattatggtg cagatgcaga caggctacac cctgtgaacc 15300
ttttgggtaa atcaatagaa atgggaaaca caaactccctt ttcttatttag agcagaatta 15360
gccattctaa gccctgcctc tgcttccat gtgacccctgg gtataacact gcctttagg 15420
gcctcagcct tctcatctgc acagtggagga ggactgtttg agatgacccc cttggcttcc 15480
ttacatccct gctggagaaa tgcgattcca ttcttgccttcaactgctgt gggactctt 15540

aggtcagcca cctcctcatt cttgtcctca gcttctccctt gtgaaaatgg tgcactcatc 15600
cacttggggc caaggtaagt gcccccagaag aacctgtctc cccatgcttg cccatatatt 15660
gtgatggggc cgtatTTTgg agattccttg gtgacctaact cgcaagctag tagtgttgcc 15720
atggcagccc cttccactgc agtagctact ttttgaatgt gcttggtcac agtgggtggg 15780
gtgggggaag tggggccctg gggcctcag caatcatgtc cagggccttg gatgtagatc 15840
catgttcggt atcaggaaca tggcattcta agagtctcac ttccctggcc ttacctcttg 15900
gaactttgtg aaagttctac ttgataaaaa cggaaatacac aaaaacccag gtgtatggag 15960
tagccccagg atgggcttat attcccttgc gggagatctt ctgtggataa aaattcattt 16020
gtggattctc gcagagcaca ggtggcccaa gttagcagca ctcagatttc aacaaatcca 16080
ccccagcttc ctaatTTAGT gctaATGGGG aaacctagag aggggaggaa gaggcttagc 16140
gccccgtcag gtctacagat gctcaggatg cctggctccc tgcaGcaggc cctgaggact 16200
gacagtgcct gcagggtcct gatggccac ttcccacctg gcacacctag catagctgtg 16260
tgctggctct ccagtagttt ggcttcccct ttgggCcaga tgtcccagtg ggccctgctt 16320
taaggatacc tcatttgcAA aacagaaccg ttAAAGCaa ttgttaatct ttTCAGAAAA 16380
gaactcactg gcgtttggg accagttcta tagctagcta gctgccctag ggctcttagg 16440
caccagtggA gggagtgagc tctgactggc tgtctctct gccttcaggg tagaggccag 16500
gactcctaga cctagcatcc cagtcctca tgcctccctg tttctctact tttccaacta 16560
gactcacagt ctctgtgctg cagtctgact aaactgctt cagttattc ctcaaacttg 16620
tcttcctctt gttcgggCC tttgcaatgc cttctggat cctgcccctg taccttcctc 16680
ctggaggca tccctaagaa caccctcctg tgggggttgg ggccctccct ggattcctag 16740
tcctgactga tcctttatgt ataattgttc gcagcttgc tcccccagcca tatctgggt 16800
gggcagccca ggagcagaac tcagcctcta gcagatgccc aagaagcaga ggagaagcag 16860
agtctagaag ctcccctcct ggtgtggagc ctgggggtga aagggtactt agaaagcact 16920
ggtatgaatg ttatgtttt ggttccaccc ttctctctcc ctccctctgg ggcctccac 16980
cattgccccg acattaacca ccctccagct ggagaagacc tttccctcct gattccccag 17040
aaagctctgc ttgaccctcc atcatggcac aggtcagtca gctgtgggtg gactttttc 17100
tatctttgtc taggcctgtt ttattcatca cagtcctctc aagcattcag tcattcagca 17160
aacatcgatc gaggcacctc tctgcgcctg accctgtgct gaggcaccagg gcccagatga 17220
atgagacatg gtccctgcaa atgcacacac atacctttc ccataatgag aaagggtgta 17280
gtacaggggt gagatgggac aggaggat gCGGTCAATC caacccaggt ggaggagaag 17340
gaagacttgc cagagaaaga gtcaacaggt tggctcttag caggccagtg ctcagtcct 17400
ggtggatgcc tggatgcat gtgtctaaAG actgaccaaa ctagacttag aagcaataga 17460
actctacctg gaggcactgc agtgaagtcc ctccctccctg gagggAACGA gtctctggct 17520
gagcacatgg tgaggcacca agtggagaca gcttcctgtg tgaggcttac gggagccag 17580
ccctggcctg ggattctaAT agcagtgggc atgaccctcc agagatggca gctttGCCat 17640
gaccggcctc tcatcatcat gtgtgtggac tcccgctgaa aggtgtctgc ctggaggagc 17700
ctggaaagaga gtcacaccc agccttgatg aagtggcatc tctttggcac ttggcctgac 17760
ttccttagacc tccctggggc tggaagagcc tgcttaggggt caatatgtac tgaccctcac 17820
tctgctaccc tccctcataa tatacaacct gttactgtgc acctcttAAA aaactgtttg 17880

ctctctctgt ctccgtcaa cttgcctca gctcttggg ggtaacttg gggtgactt 17940
ctcactcacc tagacccagg gcagacatta ggtccagatg ggcccaggtg tggcatcctt 18000
gggttgggg atgtggcag ggtacccccc acccccaccc ctgcctcaag gagccaaga 18060
ggctgttcac acctctctta gctggcatct ttctggctct ctcacattga tgccagacat 18120
tctggccctt ttcctaagt tatttagatt ccttatgaca atcctggatt aaagctaagg 18180
aggacactga gtcccaggga cagggagtga tttgcaaggt ctcattgcag gtaagaatca 18240
gagccagggt ttgaatccta agttagcctg tcgcctacgc ctctgttcct aggcaaggca 18300
ggcattattt tacccatcaa acaggagagg acaccgaggc ttacttggta attaatcagc 18360
attcatagag atctttactt tttatgaagc tcttggctat acattatctc attaattcc 18420
cacaacaatc tggtgaggta ggtattagcc ccactgtata gatgaggaag ctgaagctt 18480
tataggaagt gactcatcca ggccacttcc tacgaggtag aggccagggt ctccctgactc 18540
tcggccctg tttcggcac tgactccagg ttggcatgtc ccctgccaga tgccagtatg 18600
gaggtgaggt gggtgagga cgccgtgtgg gcttcgaga ggcgtgagct gcccacagtc 18660
tctgtctacc agtgcttcgc catgtacgct cagggcctcc tctccatagg ccaggatcc 18720
tcctggccct ctctctatct cattgccccaa aattatttt cttcatagct ctcgtcgctg 18780
cctgatgtta catcatacat taatacgtag gtgtttatc tctccctcag cagaagttaa 18840
gcattctaacc ttaactttag ccagtctgac ttgggcatcc aggcctatacg ctgcctctga 18900
ggcaggacat catctgctgt gctcactgct gtttccccag ggctagtatt agcgcttagt 18960
accttgtatg tgctctatgc cttgggtctt agctctgtcc ccacccaccc cacccaggaa 19020
gccacctttg actactcatt ccaacttctt tattctcagc ttctatttca ggcagtca 19080
caccccccctt tctgggtctt tgagtatttgc ggtctgcctc attagaactc cctgcaaggc 19140
tttgcaggat cagttcccc caaccacagt ggcacttcc ctccctgtttg accccttagat 19200
cttgccttca gggccctggc gaagcctcat ggcctcctt ggcctcctc tgccgtacca 19260
tcactctgcg acctcttctt gtaacacaga cctgtggcca tgagcctctg gaaaaactct 19320
gcttgctcac tacatatact cttcccact ctggagatgg gaggagcaat gccagtagcc 19380
accacttaat cacctaacaa atgcccacatg tgccttaaac gttttaaaat ttaatgttcc 19440
tggctggcg tggtggtca tgcctgtatcg cgcagactt tgggaggcct aggcggggcgg 19500
atcagagat caggagatcg agaccatctt ggctaacatg gtgaaacccccc atctctacca 19560
aaaatataaaa taatttagccg ggcgttgcgg cgggtgcctg tagtcccagc tactcgggag 19620
gctgaggcag gagaatggag tgaaccctgg aggcggaggt tgccagcgtcgat cgagatcgca 19680
ccactgcact ccagcctggg cgacagatcg ggactccgtc taaaaaaaaaaaaaaa 19740
aaaatataat gttccccaaa atcctgtgag gtgaggatta tcaccctcat cctatagata 19800
agaaaaccaa agcttagagtt aggtgacttg cccgaggtca cagagccagg caagggcaga 19860
gctggccctt ggccttctt ctcagattta ggggttggg gctcagacac tgctgcctc 19920
aggcatgtga gaggaagccc tgaaaacttg gtttcatca gccccgaggt gtggccttcc 19980
tggtcacttt gatatcagat attggcaaa gaggtgtca cagacacccct tcaacaccc 20040
agccctggc tggccctgg gtctgagaac tgcttgaag cacatgggtt gcgggggtgg 20100
aatccagtct cactagaaca tccacatgag actttgagca tgatatggc agaggaggaa 20160
gctctccctt gccaggatat gttcctgaag tccaggtgtg ggctggcgtg tttgggtgggg 20220

ccagcgctca acagcgtac attgttagaga ttagtgggaa ctgggagcct gaatacccttc 20280
tttaagtccct ggctcccaca ccctgacctc aagcaagtga ttttgccctct ttgggcttca 20340
cctcacctca gtttccttct ctgtgaaaca ggattgccag ttctccctt gcctaccttc 20400
ccagagagtg ctgtgggacg gtgaagcccc acataggcgc aggagaaggg gattgctttc 20460
cgggtgttaa aagagctgct ctgggcctct ctggcagctc tactccctct gccttccccca 20520
aaggttaggag caaatgagct gtgtgtaaag caagtgcgc ctgggagcag ccatttgagt 20580
cttctgttgg gaatcttccc ctacagcctg tctcatctgc ccccataaaaa cagagacatc 20640
tgtaggtacg agggttgtgt tcccttata ggtggagaaa cttgtaccta gggagggcaa 20700
aagaggctca tcccccatct ctggggtcag tcctcagtga tggggctggg tttgcctcct 20760
gccaggcagc ccagtctaac ttggcatcc aggctatag ctgcctctga ggctgctctg 20820
gatttgccta tggatttgct cagctatgca gttaaacctct atgagccccct cttaccacag 20880
atgaatcagg taccaagtcc tggcacccat gcgtcactgg cagtggatg gccaagtaaa 20940
gtgacattgg tgctgtgggaa gtgtgcagag agagtgcaga tgtggtgagg gggcagatag 21000
gagcagggac ttggctggat gctgaggctc cctgggtggcc ccacccagga gtcagaaca 21060
gtcagactgg gtgtgaaggt ggtggcatgt ggtggcatct gattgcagca tcggcatccc 21120
caccagcttc tgctggactc ctcccagcca cagctgggc agaggaagta ctgacagcca 21180
ggtggcaagg actggcagtg ttttgggggt gcccaactga accctcactt cccatctgcc 21240
tgagcaacgg taccagaact actgcaagat ggtaagctct aggtcccaaa taccctgaca 21300
ggagtcctca ggagggtggg tgccagagat cacagacttc accctcctta ccccatattc 21360
atagatgggg aaactgaagc ccagagaggt gaggagactt agcatggag ttggtggcag 21420
agctgggtct agaaacccaa gtcctgctgc cactctacct gctgtagaag atgcctgctc 21480
ctgaccacc accctgttcaagg aaaacagatc attcatttct ccccttcccc ttccagctcc 21540
ccaccactgc cccctgcttt gttgtgggaa gcagagagaa ggaacttggg gacatgcaac 21600
atcggagcag atgcaggcct gaaggttggg cctgaattgg gttcagcttt gccagcatct 21660
ggctgagtga ctttgcacccg gtatcaccat caaaataggg ttttggtgcc aaactcacag 21720
gagtccttgcgtt gggcatggag ggtctccaa agctttatgg gcctcttgc 21780
catcataacct ttcactcagc cctgcatggaa gggactccg gggcctgaa gagtgccag 21840
agcacccctt tggggctggc ctgacaggcc actggggatc cagatatggaa tcagacccag 21900
gcctggcctt cggcagctt ccagtgtgat ggagaatcag cttgtaatca gcagttagaa 21960
caaggccaga ggctgtgggaa accctgagga ggatgctctt ttgtttctcc attgtgcggg 22020
tctgacttta tcttcaaata gtttatttct gtgggtggca agatagcccc tggcaattcc 22080
aggcctgcat agacccatgt gtttatcattc ccagagaagg aaaggcccttc tctttccaaa 22140
ggcttcctgg aagactgctg ctttattcacc atctctgggt tttgaaggat gtattgcttt 22200
atctcattat cagggaatca tcaggtaaagc aaagcaggga agggcctctg cctagaatat 22260
ttctgaggtg gactgggggc tccactggc ccgggggtca gcatccatgg ccaggccagc 22320
tccctggccca cggcctccat ggtcagccag gttgggattg cctgagaggg cctggcctg 22380
agaaagcaga ggtgcagtcc tccctgatc cctctccagg agcctcccaa ctctaacgcc 22440
cacggaaagca cttgccattt ggtatttggg acttagagct caccacccctt cagcagtc 22500
ggtagactgc cccaggcaga tggaaagtga gggttcactt ggttagactgc atttcccact 22560

tgttggcaga gcgagctgtg ggccgttagtt ggggctggat aaggcagggt gagaaccgaa 22620
ccagcagtgt gggaaaagcc tgacgcctgca gacccacett gctgcgggac ttgggagact 22680
cccgcaggcc ctcaatttcc agtctgtata acggggtgag gttgaacaa gatggcgtgc 22740
gtttcctgcg ctatgacttt acctaatttt aagacaccta ataagcttag cagagagatt 22800
tggatttaggc acgatgaaga atttttaggt cttctcagtt gtttcagttg gggatatgtc 22860
atcaagtgaaa tttctatact cctcctccaa gctgcattgg ggctggccct ggcgtcaagg 22920
tagggagcta gataagttga ctcccagcat gcctctcccc tacgcacccc tcaaaccact 22980
ggcttcaggg gcctgtctgc aacgggaagc aagtcagcc a gagaaggca tgcttgcc 23040
tttttcctg ccaaataaaaaa ggtgggttgc cccgggtctg tgtctcaccc cagccctac 23100
ctgagtgttt ggactgaagc atttatagtg gtgtttctca gacttaatca cctggggatc 23160
ttgttaaaat gcagattttg attcaaaaaa tccagtcgg agcccaaagt cctgcatttc 23220
taacccgctc ccaggtgatg ctgatgctgc tggtccca a caccgtttg agtaggaaag 23280
tgctagagta cattttgtct tctgtcttagc cagggcatcc agcctgcctc agatgaaaca 23340
ggaactcacc tgccacttaa ccagcctccg gtggccatgg ctccctgcttc acttcatcca 23400
gcatggctca ggaggcagag ccagctgctg gaagatgact tgtccagccc cagcccttgg 23460
atcaagggtt caagcctgtg cttggacttc acttccctcc ctatataact caccaggatcc 23520
tgtcccactt gtaggtgaag gtgaaaggaa atgagaccct caaggataag catgtgatga 23580
actcatctgg ccaggtccca ctgctggca ggttaccatg gccctgagca tgaccctccg 23640
actgtgtcct gtgtacagag cctttgcact cagagctgct ctggggaaag gggaggtcct 23700
ctaagcaggg tcaggaatgc tgggttcag tcctggctct gccgcctact gcctgggtag 23760
ccctgggcta gtcagtgccct gtctctggc cccagctcc ctggctgtcc aattaggcta 23820
tactggatga ccccagaggg ctctcaggct ctaagatggg ttgctggca agtctggagg 23880
tggaaaagtc ctatgaaggt aggattttg taaagggggc gaaggagcaa ttatgaggca 23940
gacctctgga atggctctat gcccagccct ctttatttgc tttgtgagt tcacatcctg 24000
ccgcctccac cccagttatg ccagtggtgt tattagatgc tactgaacac ccaatttg 24060
caactgaggat gtggcagtga accctgcaag ctgcctggg gtcacatagt gagtagaacc 24120
aaagtctgaa cctagggtt actcttctgc taaactaagc ccttccctc tgatgcatca 24180
caccaggaa agggccatc ttgaggccta gcatttcctt cttccctc aaaagtcaaa 24240
gcagttgtta actttcagct cataagggtt gatatcttc taaactctgc tgtggctttg 24300
ttgcttgca gatttgaag aaaagcaaa gcttgagtgt aggcccctaa atccgtctt 24360
ctccctgctc ccagcttgta ggctcagttg aaaggtcatg agaccctcaa ggacaagatt 24420
gtgactaact catctgtgct ctgggtcttt cacagagcag atggatgaa ggaatattta 24480
atgggcacac agtaggtgct tggtaagat gtgttgagca aagggcatgt agtgggggtt 24540
cagcaaagag gggtttgagg tggccactt ctgcagctgc cgaaaggaat gggatatggg 24600
tgaggaacct tcacccatgc tcttccccag tgctgtctcc tgca gtcacc aggctcctg 24660
tccctactgc ccatcagctg ctggagtcctt ggggtcatc ctagggcacc caagccaatt 24720
aagtgggcac atctcgctt aacttccagg ctggcactt gattgatagt gaacataatt 24780
acagccctca gtgtccttca ggctgcctga agctcactgg ctactggcc ctttgggaa 24840
gcaaaggctc ccaccttact ctttctggg cccacgctt tggcactga gatgaggctg 24900

aacatttaca tctctctgaa agtggtagtg gtgtgggaa tcagtggtgt tgggggtggg 24960
ggcaagaggg ttcagctcct tggagaaggg gtattagtct gggacataca gaaggcagag 25020
cagggattgg ggtatgctcaa agtacacttg gagaaaaaaaa accattgcaa attggatgtt 25080
gaacctctgt ccttggccct acagacagat agcaaaaatta aatatttcta ctagattcag 25140
ataagggaca ggagttgac tggggtggag gggatgggag agaactggca attatgagag 25200
acttcccaag gccttagccct tggactagcc tctttagata cttcatgtgg tctccaaaat 25260
gaccggaggt gcgataccat tcccattgtg tatctataga aaccaggggca caggggagca 25320
tgcagacagc ccagagttac aaagccatga ggtggagggc taggatctga acccaggtct 25380
gtctgattct atagctgatg ctcttctcat atctagaagg gtacctgtgg gaggtgaggt 25440
ttgtactggg gacccatga ctggagagaa gggtgacagt ggactgacat ctccctctg 25500
ctgttaggcac tggatccagc atcctctccg ccctccagga cctcttctct gtcacctggc 25560
tcaataggtc caaggtggaa aagcagctac aggtcatctc agtgctccag tgggtctgt 25620
ccttccttgt actgggtaag ctgggccta gagggagggc aggtgggca gcaagtgtcca 25680
cttccccaaa agaggttagag caggagccct gctctacagg ggtgagggaa taagagtaac 25740
tcttacacat gctcccccac agcacccctc cacatctatc ttttgggtcc cagatcaagt 25800
gctctacccc tcagcatgca tgaagattca gcaagattca gtgggaggtg gtgtgatagt 25860
tcccatttac agatggaaaa cctcaagtct tagagaagat agtaacttg cccaaaggta 25920
cacagatttgc aatccctgtc tacaggaccc ccaaaggctg tgccttccc acaatgccac 25980
cctgcccacc aacagacatt ttccagcagg tatgttactt tgccttaagg tggttgggt 26040
ccaggttaa gtcctgaatc tcctgcagac aagctctgtg acttacaca gtttatttga 26100
gctctctgag tgtagtttc ctcathttga gtgtgagggaa agtgcctgct tcacatggct 26160
ttttttagga ttgaagataa gaaatgagag cacctggcac agggcctggg catgatgggc 26220
ccccattaca tggaatcat cgggaggtgc cctcagaccc cactcccagc ccacacccat 26280
cctcagctga gcacattccc caggtgcttc ccgaggcctg ctccctgcta tctctcagca 26340
cagcccacat cggtgcttgc gttgtttt ctgcaggctc ggctagatac cctcactcct 26400
taggttgcca tccaggccag gggcaggaca acacgaatgt ctgagggggag ggaagaagcc 26460
tcttggggat ccccaacttcc ctgtgctctc agcatagcag gtatgttccct cagcacgtca 26520
aggcagatga acctgctcca gagcatcaca gagtgcattc cagtgctgt gaggccactcc 26580
ctctggccaa cccactcttc gggactgtat aggctggtag gggatcatca ggacttacca 26640
tgtcagtgtc gagcagctgt ctttcaggca ggtgcattgg ggcctctgag actgagacca 26700
tgtagttgcagg gccaaggat agaacttcac aggtgagaaa atgcaaattc acaaaggatcc 26760
atcaactacc tgctactgtg aagctcatta aatggcagag ttgggatttt agcagaaact 26820
cagtgcatc cccaggagc ccacattcct ggaagcccag aattagtcaa ctggggctga 26880
aacagccagt cttcacctt aggcccaaga acgggcattt ggtggggggg tccatgaacc 26940
cttaaaaatta gatgcaagat tatatatgag tatgtgcaca tttttctggg gagaagggcc 27000
atagctgtcc tcaaagtctt acagggacag gtagcctcaa gaagacaaac actgggttgg 27060
agaactgagc aaactaaaca gtctccctca ggactcagac ccctaacatg gttgcattt 27120
ggccacttac tagaattcta gagtagtgag cacagtgtga ccccttcttg ttaaaaaagg 27180
aagtggaggc ctggcgagga tggagcctta cttgggggtca catgagaaga aagtactggg 27240

accaggacaa gaacccaggg actccagcct cccagacccc ctgcctagtc tgctacacca 27300
gctctcttg ttccctgttgc accccaaag ctaccactat ccctgtctta atgggtctgg 27360
gcctggctgg tagggagctg agcagcttgt agaacaccag ctcacgcagc atgtatggg 27420
gactggcccc aggctataagg ttaataatttgc atcagaccca accacagccc agaaaccggc 27480
ccagcatctt ctcaacaccc tcgcctggcc tcacctcgcc tcgcctcgca taggtggaa 27540
cctggcctcg ttggacagggc agatctcctg agtactgtc aattactgcc ctcagcagcc 27600
ccagccactc cttccctctg cctctcaaac ctgctggcag aagctcacct ggcaagcaaa 27660
gaccgtggtg gccctgttgg tctctccctg gaccagagat ttttaccac tttgtgccat 27720
ggaaccctct gtcattttga tgaggcctat gcccttctc agtgttttag agtatttaat 27780
acaaggtgca ttggatttca aaggaaacta ctgataataa aatataaata tctatacatt 27840
aaaaaaagctg attagacatg tagtaacagg tgcctttta ttacagtaaa taaaaagatc 27900
tagcagcaca tgtaataatt actatagttc ttaagttagtg atgagaagaa atgattttt 27960
ttaagatatac tgcaactgct acaaagttt atgaaaatac ctttgttatt tatttgtgtc 28020
ataagtactg ctgataattc tgtgatttat tatattggta agtgaaggaa atgccacatt 28080
tccataagag ataagtggaa atttagatgt catttggcctt cccatccaag tccatggata 28140
tttgtgtca ggctgagtaa gttcaaacat cataatttaat ttcccataa ccctgtaagg 28200
aaattaaggc ttaggaatgg ggcttggcca gcaagtggca gggccaaggc tccaggtctg 28260
tttggtctca gagtccatgc tcttcaccag gccacactgc tgcctccct gccattgagc 28320
atccacagggc tgcctgcac cacaggcctc gtggcttcag aattttgtat cacaagtgtc 28380
ttttaggccc accataatgt gcaggaagca ggtgatgtgt gaaagtggtc ctgagccttc 28440
catgtgtggg gcaaagcagg gccttctaag cttctcatga gctcagcaac agtggtttt 28500
actgcagccc cacaacctaa gagcatggaa ccagggctg ttgttcagag gacaaggatt 28560
aggctctgag aaaggaaggt catttggtgg atttagttca tcctttgtc cttctgtgt 28620
ttggttctg gggctggaga gattaatctg acctggtttc tgctcccaag gagctcgggc 28680
tgaagggctg tctgttagtg ggagtccaat gagggaggca gatgtgaaa gggatggta 28740
gtggttcag agaggcgtgt ggacacatag gggagggag ggagccccca gctgagaaag 28800
gccaggctag aattcagttc ctggataccc catcaggcct cttctctcc atccaggctg 28860
cctcagcagc agagtaagga caagtggta gggtaacccc cttcccaaga gagaccagcc 28920
ctctaaggcag tggggcctgg agctcagccc cttctggcc ttttaccct caagagagtt 28980
agagatttct ggaagctagg tttccaggat gctcagacca tagcctaaac ctcatgtcc 29040
ctatctggcc cacctggagc atccacctag agatgccac tagaggagcc tggatgcctg 29100
tagagtctgg gggcttagag tcttcctt tcaggccaa gaaagggaaat caggcagact 29160
gctgaacagt aagtatgact ttgttaggcag ctttagaca tagtattca ccaagctacc 29220
gtaagctttt cacagttgc ttttaacagg ctcttgcagg ctgcacatgc ttccctagaa 29280
acttgtcttc cttctgcga tgtcacaccc ctaagctggc cttgaaaaat tggacatctc 29340
gtcactctgtt attcactgtt cttcccaaca agagagttgt accctgtttt tagtaccct 29400
ggggagaggc tggctcagga gtctagaaca gggctagatt gggggcaac aaggggctac 29460
cattttccctc cttcttaggtc catggagact ctacatccag ctttatcttc tcccatggga 29520
aaccaaagga ggctcaacat ggtgagaaga gagcatgaca tccagagcca ggcagctac 29580

agcacctggg accaccaggg aatgggcaca cagcaagggt tggcctccct tcttggcag 29640
tgaaaaagt cctagaagga gtccatgctt ctccccacaa acatgagtagc ctgctgccct 29700
tgcccctgtg ctgaatgcca aggaccaaag aagatgcctc cccacccagt gtggaaatt 29760
cacaggcaag agatgatatg tagatagtat gatattgggg aacacttctt gaagagctga 29820
ggtctgagat aggccctaaa gggtggtaa aaaatggaaa gagagaagcc ctgctgaggg 29880
cagctagtgg cgagccatga gataaagcag gcatggcaca agctctcctt ctttctgtg 29940
ccaggctaga ttatgtcttc ttatgaccta caggcccaga acatggtgac cagtggaaagc 30000
cagccccag gcaagtcttc caagtgtgct gttagggttt tttttttt acttttgaga 30060
cagagattcc ctctgttgcc caggttgcag tgttagtgcg ccatcatggc tcactgcagc 30120
ttcaaactcc tggcttaagg agtcttccca tctcagccctc ctgagtagct gggactacag 30180
gcacatgcca ccttgcagg ctaattttt aaattttt gttagagatgg agtctcgcta 30240
tgttgcagg gctggtctt aatttctgag ctcaaggagt ccaccaccc agtttccaa 30300
agtgtggga ttacgggtgt gagccactgt gcctggctgc tgaagttttt gaagacaggg 30360
aggctgatgg gctctgcgt ttggcctggg acttccttga ttggcgatat gttggaaagg 30420
agccagccct ctcctgggc aagtgtcccc tctccggtcc ctctagtgtat ggtctggac 30480
tttggtgaat ttctaaagcc taatacagag aacggactgt agagtcagac ctgtgtttga 30540
atcctggctc tgccactgtc ctgctgggtg accttggca agttatctcc cccttgagcc 30600
tcagtttct tatctctaaa atggggcaaa gtcaccctgc ctacacttg agacagtggc 30660
tcagccccag tctttagatg cagaggact gggtaggtgt tccctcccc tatccacagt 30720
gtctggctg ggtgctggca tggggcgca cacaaggagg ggacagtaag agcagttca 30780
caagaagctg aagcctatct ccttggtgc tcctgtccag ataacatggc gcccattggc 30840
ccctcgatgc caggacagtc catcagagtc tggagatga ggctccttgc gtcccaggaa 30900
tctgtccta cctggctga acattcctgt agctatttct cagggttgtt gggcccatg 30960
cccatggccc tgggtgtgcc tagcttagt ccacagtaaa cactcactcc atccaccatg 31020
gcccagaggg gagatgaagc ccagtaggac ctgacctgtg gccatctgccc cccaggagt 31080
ggcctgcagt gccatcctca tgtacatatt ctgcactgtat tgctggctca tgcgtgtgt 31140
ctacttcact tggctgggtgt ttgactggaa cacaccaag aaaggtaagt gcaaggcctc 31200
ccttgcggca cctctcattc tagggatgt ctccccctg cacaagctga agggcctcat 31260
cctgagtgct gtttcttttta acacccactt tgtaaaaagc actggacttag tcctttggg 31320
gggaggttaa aagccctca aaggcactg ttctggcct gacaagagt cacactcagt 31380
cgagggtttg cataacatga aggaatgaat gtggaaagg gcctgatgg aagggggcat 31440
ggtgcattgg gtgatggtca cctgcttggg ttgcacactg gcctgtctt gtctgcctt 31500
cccaaatgtc cccccacccc caccaactct gtattttatt ccctggaaagg tggcaggagg 31560
tcacagtggg tccgaaactg ggctgtgtgg cgctacttgc gagactactt tcccatccag 31620
gtaaaagtgtc gtgagtgttg ttttggagg gtggaaatgg atggaaatc tgaactcagg 31680
ccttaaccca cccacaggg acaagtttac gaccaagttg gtctcttcat ttccttctta 31740
ctgtgtcact ggctgtgtc gggacccac tgctcttctg agtatccatc ttctttggc 31800
cagccctgag gtcctgacag gaaatggtg gtcagtttgc gctttcagtc tcagctctgt 31860
ctggccccctg cctggtctgc aagctggctt ggtgaggcac agccatctgg ccctgatgca 31920

tgtggcaat cctggtaat tgaggataac tctggcagga tcctgaaggt tttccccaca 31980
ggggaaaagac ctgtctggcc agctcactcc acaccccagc tccagcacac cctagctgct 32040
gagtaacctg cagaaggtag gggtgctgaa gagtggaggc agcacgtgaa tgtgaaagag 32100
ttctgtgcag ggtgcagggt ggtgtatatt tgctgttg agtcagtgc tgagatcctg 32160
gtgtgttgcc tggggcagt ggctggtaa ccctgcattcc ttcaactgcat tcggtatattt 32220
gggggtggca gggccagctc cttctgctca tccttagcct aagcccagtc ttcccgac 32280
cttcctgctc ctcagggtca gcgttccttc tcctttcct gaccccatct ctctaactgc 32340
agaaaattt aagctgtttt tggtggaga aagttgcattc ataggaccac accctctaatt 32400
tttggaggta aagaaaactga gcctcagaga tggcaggac ttgtccaggc tgcatagtct 32460
agtatgatgg caacattgca accaccatcc aggcttattt aattcagggc ccaggttctt 32520
ttccactgat ttcctactgc ctgtttctt gggagagatt caatccctgg atttcccat 32580
tggattgatt ccagcttcct gggctccct ctccccctt gctgctggag atctcagttt 32640
aagttctgc cctgtcactc catttattaa cctgccacca ttgctccctg tccagtgcag 32700
ggctgtgtg ggcattggga cacaagtcag ccctgccctt ggggtgtcta ttgcattcctg 32760
atagactttt tcactttctg ccattggggcc atgggcagac ttctcaagc ctgctgagcc 32820
tcatctgcaa aatggagctg tctgtatgat gaaaagtaat cagttctgat tgggtggag 32880
tgatgataga ctgttcttc tgctttctt ctcacccctt gggccaggct ccagtttct 32940
ctgttgcac tggccctgg tcctctggaa gtctccagga gcccaggtagc cccatccact 33000
tagaacagga tgacctgatg attgttggc agacctggga caggcagggt tccttgcta 33060
tctgatctcc acccttccaa aagaacccaa caaaccctt tgcttcttc acatctctgt 33120
tccaagaagt cagctggag ttggagcctt agggcacata caacctggcc ctgtgaggc 33180
tccctggggc actaggacaa aagccaaact gggcccgagg caggctgggg tggagcct 33240
caaccgggg cttaggctga tcaaccctgg gcttaggctg agcctgcctc tctccctctg 33300
ggcctaattc tccccttac ttggccttgg tgatctgaca tcaggtctga cactctatgg 33360
gggtgtgtgt gaccctccctg tcccacccccc ttttcctggc ctcttgccag taatcatgta 33420
atgaagatct gcccgtgtac ccacccggcc acctactccc ttctgtgtgg gactctggc 33480
tttgcgtcca gaacagctca tctggcccag agtgtatccc ttctgttggc acaggtgggg 33540
ttcttggtt agcaacagcc accgagacca ccagccaccc ggaagaggag cagacagtgc 33600
cccacatcac ctctcccaa agtgtaggca gaatccttgg agaggagact agaaaacact 33660
ctctctaagc tttagaatcac ctgtccatct gcctcatttc actgataggc ttactgaggc 33720
acagagagga gggactatcc caaggtcaca aagcttaagt agtagcagga ctgtgttagg 33780
aaccagggtc gtctgctttg gggcccatgg tcttactcct gtgttacttt caccatcacc 33840
atgccgtgt gttaaactt aagcaagcct ttgctttctt gtgggtctga attttttctt 33900
ctatgcactg ctgtgggtgg acaagcctat ctgagcacct tgccctctccctt gggaggggagg 33960
gtataaaagag tgacttgata ggaatgtgtc ccagactgac attagcgagc aggccggggcc 34020
tgggcatcgt gttgggctgg gactttgcca cggaaacag gcagcaagag gacacaagag 34080
caggcatgtc aacagaacct tcattggcgg tattcattccc tccttccag aacggacatt 34140
ctctccagcc ctgggggagg ggagtgtgac atgaaaacag atcagagctg gtcagatgcc 34200
tacatttttccac tgggtcctac agcaagggca ttgacttgca ctgtgtccca aggcacccca 34260

ttcaaccaaa tgtcccatca gagccttggg gagggaggaa atgatttaaa gagccacctg 34320
ggcccaactg ggtgacacat cttcatccag cagcccaggg aaaagtgcag cgactggcct 34380
gctccagatg tgcaggataa tttgctgtga cctccacagg ggaattgcag ctccctttc 34440
taggcctcag cttccccccg tcatccaagg aatggcttag acctttcagg gctctgccag 34500
cccatgcagt gctgtgggtt cctggttatc ggcccagtgg gaaggtcggg ggagccatag 34560
gaaggggaca aaaagatgct gcacggcgtg atggtcacct gccaggtaa ctatcccagg 34620
cctggccatc agctcaggag caagttcca agtttcccac ctggtattgg ctgccccagc 34680
tcttcctca atgcctgcct gccttttca tcaaaaactag cacaaggaac ttttaattc 34740
cagttcact gagagctaac ttggtggca gacctgctt taggcaaaa cattggaaca 34800
gcaatcttaa cagagctcat gtaaacgaga ttttgagatc tgctcgctgc cccgagcccc 34860
actagctatg gattagactg ctgctgttcc ccatttattt ggggagtagc tgagagttgg 34920
tttggtttt gagcaactt aatctgttg ccaagggcaa agcgggagaa agagcatcag 34980
tgccccaagc agtggggatg agagtgggg agtcttgctc acatttgac agactggcag 35040
cgtcagagct gggagtggtg ccagccagcc tttccatcc cctctgtcac ctgaagattt 35100
gcatttcaat tttccaaggc cagccaccag caccctctcc cccagagctg cacacaagtc 35160
cttcagctct gccaggaggc tcccaaatct ggagtcacag aaaacctggg ctcttgacat 35220
tctgctggtg gccagtgact ctgcttccag ctggcaccag tgcagggaaag gggcactttg 35280
cagcactcag gtgggagtg cattgatgtc acctctttt aggcaggggca gccaaaaaaga 35340
ccaacgtgtt cattccttgt tatccaggaa ttgtatttct agaagttgt ttcacaaaag 35400
caatcagata tgtggacaaa gataaggtat ttattgaagc attacttcta agagggaaat 35460
tttggagct tttaaatgt ccatcaatca gggtttgagt cagtgctgtt acatgcatga 35520
gagctgtgct gtagaataca aatgcagcca cgagaagata tggaaactgag ggattttgat 35580
aaggacagat agctgtatgt ttggtagaaa atgatataaa aatgatatac acccatataa 35640
cctcaatttt gtgggttttg aaaaagagca tgtataattt tgagtagaaa aaggactcaa 35700
tgcgtcagat gttttatct ggatggaaat attatggatt tttaaattt tcttttgct 35760
ttcctatatt tttaaaattt tctaggagtt tctcttctt tccctctccc ctccctccc 35820
ctccctccc ctcctccgt tcctctcccc tcctctccgt tcctctgccc tcctctccgt 35880
tcctctcccc tctctctcc tcctccctt ctcccttctt ccttccttc ttcccttct 35940
tctcactctg tcaactcaggc ttgagtgcag tggtaatc tcggtttact gcagcctctg 36000
cctcctgggc tcaagccatc tttccacctc agcctcctga gttagtggga ccacagggtc 36060
gtgccaccat gcccagttaa tttctgtatt ttgttagaga taagcgttcc accatgtgc 36120
ccaggctggt ctc当地actcc tgagctgaag caatcctccc accttggccct cccaaagtgt 36180
tgggataaca ggc当地gagcc accatgcctg gccctattat tttctatc agaataaaaa 36240
tgatgtttt atgagcagaa tacccctact cattgtctct ctcagcctct tccaccccca 36300
tcacattct tgaacacag ggtaggtgtc acaggctttg cctctcatga ctcagggttt 36360
agggacactg catcaccac ccctcaagc accagccccca gggcaggagg tggccctga 36420
ggaagccat catcgtttag agcatcccag tgccttagt accacaggtc aggtcctcag 36480
ctgctgcagec cttacaacta acctctaccc caggctggct ggcacaggggc tgcgtttgt 36540
cctgtcttgtt cttccctgcc ttagaaccctg aactgagccc agctgactgt gggaaagttt 36600

agaaggccca tcagaacctg gtagagaggg atcatgtcaa ctgggacac ccaggttaatt 39000
ctgg tacacc cagctgggg agggggatgc ttggccagtg tccagggcct ctaggctgac 39060
ataaaaactg aagccagtaa gtagggtatg acagaccctg gcctctccct tccagagctg 39120
acctggttcc catctactcc tttggagaga atgaagtgt acaagcaggtg atcttcgagg 39180
agggctcctg gggccgatgg gtccagaaga agttccagaa atacattggt ttgc(cc)cat 39240
gcacatccca tggtcgaggc ctcttcctt ccgacacctg ggggctggtg ccctactcca 39300
agcccacatcac cactgttgtt aagccccctag cctgcagacc aaggggctgtc ctgaacacag 39360
ggtgc(c)atac agctaattcag cagtagagac gggattccaa tgca(g)ccac ctggctctga 39420
tggccatgcc cttagccatg aggactttga agtgggggt gctgatattt gtcaggaggg 39480
gtagtagtag gagtcgggaa attgagccata tgggatgaac caagctctgt gataagttag 39540
gaaagaaaaat ctgcagtctc tgggtttgcgc gcacccacta gtctatcagg gaagactatt 39600
gcagcaaaga ctagtggggg aatgtgatga ggatgcgcag gtgc(t)tagg gagtcata(g) 39660
ggaccccagg gaggaggtaa ctcttgcact gctaactgat aggaatttac tagcaaata 39720
gaggaggaag agaattttta tcagaaacaa tagcctacgt gaagttcaga agcaagattt 39780
tgtagtttt ttgaagaaca gaaagaaaaa cattaatatg actgcagcat agacctgtca 39840
gaagagtggaa aaacactggt tgcacttggc cctcg(t)ctgt gttgtttgg gtgtatttgg 39900
gaccatttag aggattctaa agaatttacct attgttaggtg tgtgtgtgc tgtaatgg 39960
tccccagga gcacatgggc cttggcagt ggacttgagg gccc(aa)agct cacacagatc 40020
ctttgcgttc cttagccagg tgtcctgcct tttacttttta ggttagagaca aagcaacagg 40080
gaggcagcag gaacatttcc atgcacaggt gtggctggg aggggctggg tcctgtggc 40140
aatgtgaagg aatttgc(t)tc tCACCTTGCAG aatggagagc caccagagag tgtttggag 40200
ggaaagttca gatttgcatt taaaaatgtat cttggagct gctggatggaa agatgggta 40260
gaaaaatggaa agccacgaga ccagcccaga gactgttttgc gtagccagtg gcttggacca 40320
agggagtagc agtggagatg gaagagatgt gcatgatttgg ggaaaaattt cagaaatagc 40380
attggcagga cataggaatg gattgggtat ggagatgcag caggataaga aaataaagca 40440
acgcacagat cataaaatgtct ggtctactcc ctcccttcctt gcccttaacc acactttta 40500
tttttttttt ttttattttt gagacagggt ctcattctgt catccaggct ggagtgcagt 40560
ggcgcaatct cggctcactg taacctctgc ctccctgtt caagcgatcc tcccacctca 40620
gcctcctgag tagctggac tacaggcgtg caccaccaca cccagctaat ttttgtatt 40680
ttttttggat agagacgatt ttcaccatgt tacccaggct ggtcttgcac tcatgagctc 40740
aagcaatctg cgggtctttg cctctcacag tgctggattt acaggcgtga gccaccactc 40800
ctggcctaca cttttaaag catgtcacat tccttgcaga atccttagaa aaccctatg 40860
aggaagaatc cccatgtgac agatgaggaa actgagggtc agagaggcag gaatggctt 40920
cccagagcag agcaaaagca aagatgttta ctgtatcccc tgactctcat agacccttct 40980
agcagaatgc agtgggttca accagtcttgc atcccatctg cagcttagca cctggtggcc 41040
tcgggtgggt cccttcacat gccctgggc ctca(g)tcttt tcatctgtaa taggggacaa 41100
ccagagatgc agcacataaa gcatttggca cagttcccttc cacatggcgg gcccacagcc 41160
cagcgtcacc accttcagca tcatggtggaa tgcccagggg aagggtgttgc actaaccaga 41220
agcctctgccc ctgtccctgc agtgggagag cccatcacca tccccaa(g)ct ggacacccca 41280

acccagcaag acatcgacct gtaccacacc atgtacatgg aggccctggg gaagctcttc 41340
gacaagcaca agaccaagtt cggcctcccg gagactgagg tcctggaggt gaactgagcc 41400
agccttcggg gccaattccc tggaggaacc agctgcaa at cactttttt ctctgtaaat 41460
ttggaagtgt catgggtgtc tgtgggttat ttaaaagaaa ttataacaat tttgctaaac 41520
cattacaatg tttaggtcttt tttttaagaagg aaaaagtcag tatttcaagt tctttcactt 41580
ccagcttgcc ctgttctagg tggtggctaa atctgggcct aatctgggtg gtcagctaa 41640
cctctcttct tcccttcctg aagtgacaaa ggaaaactcag tcttcttggg gaagaaggat 41700
tgccattagt gacttggacc agtttagatga ttcactttt gcccttaggg atgagaggcg 41760
aaagccactt ctcatacaag cccctttatt gccactaccc cacgctcgtc tagtctgaa 41820
actgcaggac cagtttctct gccaagggggaa ggagttggag agcacagttg ccccttgg 41880
tgagggcagt agtaggcatac tggaatgctc cagtttgc tcccttctgc cacccttacc 41940
tcacccttag tcactcatat cggagcctgg actggcctcc agatgagga tgggggtggc 42000
aatgacaccc tgcaggggaa aggactgcc cccatgcacc attgcaggaa ggtatggcc 42060
accatgagct aggtggagta actggttttt cttgggtggc tcatgacatg gatgcagcac 42120
agactcagcc ttggcctgga gcacatgctt actgggtggcc tcagtttacc ttccccagat 42180
ccttagattct ggatgtgagg aagagatccc tcttcagaag gggcctggcc ttctgagcag 42240
cagattagtt ccaaaggcagg tggcccccga acccaagcct cactttctg tgccttcctg 42300
aggggggtgg gcccgggagg aaacccaacc ctctcctgtg tggctgtta tctcttgatg 42360
agatcattgc accatgtcag acttttgtat atgcctgaa aataaatgaa agtgagaatc 42420
ctctatgagt tattgctggg gctgcatactg catctgctgc tgacacctgg ggaagactgg 42480
gtccccagct ggctgccctc tgagccctct agcccttgc accttggcc cacatgaccc 42540
tgccatggtg tgaagttac ctgtcactgt gtaacaaact acttcagagc tcagttggc 42600
ccaacagcat ctgttgtctc ccagttccaa gtcacgattt gaggcttggc ttggcctcc 42660
actcagggtt tctcacaggg ctgcagttgt cttggagccg ggctgaggaa ggtatccactc 42720
ccaaggccgt tcctgcagtt gttcgcagga ttgacttcct cactggctgt tgacagaggc 42780
cactttcagt tcctgcac atggccctt ccatgggta gct 42823

<210> 19

<220>

<400> 19

000

<210> 20

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 20

ctcctgccac ctttcttggg

20

<210> 21

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 21

tggatggaa agtagtctcg

20

<210> 22

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 22

ccagctggat gggaaaagtag

20

<210> 23

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 23

cttcaccagc tggatggaa

20

<210> 24

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 24

tgtgtttca ccagctggat

20

<210> 25

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 25

ggttgtgtgt ctccaccagc

20

<210> 26

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 26

cagcaggttg tgtgtcttca

20

<210> 27

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 27

tggttcagca gtttgtgtgt

20

<210> 28

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 28

tcctggtggt cagcaggttg

20

<210> 29

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 29

atagttcctg gtggtcagca

20

<210> 30

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 30

aagatatagt tcctggtggt

20

<210> 31

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 31

atccaaagat atagttcctg

20

<210> 32

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 32

gtggtatcca aagatatagt

20

<210> 33

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 33

aaggcaccca ggcccatgat

20

<210> 34

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 34

cctccagaca tcaggtactc

20

<210> 35

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 35

gcattgccac tcccattctt

20

<210> 36

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 36

tgatagcatt gccactccca

20

<210> 37

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 37

gatgatgata gcattgccac

20

<210> 38

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 38

accacgatga tgatagcatt

20

<210> 39

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 39

ttgccaggca tggagctcag

20

<210> 40

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 40

tggacccatc ggccccagga

20

<210> 41

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 41

tcttctggac ccatcggccc

20

<210> 42

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 42

gaacttcttc tggaccatc

20

<210> 43

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 43

ttctggaact tcttctggac

20

<210> 44

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 44

ggcaccagcc cccaggtgtc

20

<210> 45

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 45

agttagggcac cagcccccag

20

<210> 46

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 46

cttggagtag ggcaccagcc

20

<210> 47

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 47

cagggcctcc atgtacatgg

20

<210> 48

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 48

ttcaccaggg cctccatgta

20

<210> 49

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 49

agagttcac cagggcctcc

20

<210> 50

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 50

aaccacacaga cacccatgac

20

<210> 51

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 51

ttaataaccc acagacaccc

20

<210> 52

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 52

tcttttaaat aacccacaga

20

<210> 53

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 53

acaaaagagc atcctcctca

20

<210> 54

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 54

actataaaatg cttcagtcca

20

<210> 55

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 55

ttgcacttac ctttcttggg

20

<210> 56

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 56

agcactttac ctggatggga

20

<210> 57

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 57

tcagtgaaat gaggcagatg

20

<210> 58

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 58

ctcaaaaagag gtgacatcaa

20

<210> 59

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 59

ggattcttac ctccagacat

20

<210> 60

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 60

caggtcagct ctggaaggga

20

<210> 61

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 61

ttccccctgga cctccatggg

20

<210> 62

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 62

gtggcgcgag agaaacagcc

20

<210> 63

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 63

gccagggctt cgcgcatagc

20

<210> 64

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 64

agggtttca tggctgaagc

20

<210> 65

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 65

aggaccccg agtaggcggc

20

<210> 66

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 66

acccactgga gcactgagat

20

<210> 67

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 67

ggcagatac ctccagacat

20

<210> 68

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 68

cgtttccgca gggtgactgc

20

<210> 69

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 69

aaggctggct cagttcacct

20

<210> 70

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 70

gggagttggc cccgaaggct

20

<210> 71

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 71

gctgggttcctt ccagggagtt

20

<210> 72

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 72

acttccaaat ttacagagca

20

<210> 73

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 73

ccacctagaa cagggcaagc

20

<210> 74

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 74

gggaagaaga gaggttagct

20

<210> 75

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 75

tcacttcagg aaggaaagaa

20

<210> 76

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 76

ctttcttccc caagaagact

20

<210> 77

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 77

ctaaactggtc caagtcacta

20

<210> 78

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 78

ggcaaaaagt gaatcatcta

20

<210> 79

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 79

ttcgcctctc atcccttaggg

20

<210> 80

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 80

ggcttgtatg agaagtggct

20

<210> 81

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 81

tttcaggact agacgagcgt

20

<210> 82

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 82

ctccgatatg agtgactagg

20

<210> 83

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 83

ctcatcctgg aggccagtc

20

<210> 84

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 84

ccatcctcat cctggaggcc

20

<210> 85

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 85

gtgtcattgc caccccccac

20

<210> 86

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 86

accttagctca tggtgtggcgcc

20

<210> 87

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 87

accagttact ccacctagct

20

<210> 88

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 88

gtcatcagcc acccaagaaaa

20

<210> 89

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 89

gtgctccagg ccaaggctga

20

<210> 90

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 90

accagtaagc atgtgctcca

20

<210> 91

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 91

gaggccacca gtaagcatgt

20

<210> 92

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 92

gtaaaactgag gccaccagta

20

<210> 93

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 93

cttcctcaca tccagaatct

20

<210> 94

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 94

tgctcagaag gccaggcccc

20

<210> 95

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 95

acctgcttg gaactaatct

20

<210> 96

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 96

aaaaagttag gcttgggttc

20

<210> 97

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 97

aaaagtctga catggtgcaa

20

<210> 98

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 98

ccaccctaga tgagcagaaa

20

<210> 99

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 99

ggtaggtgc cgctgccacc

20

<210> 100

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 100

agagctgagg taggtagccg

20

<210> 101

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 101

gcgcgtgagct ccggggagctg

20

<210> 102

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 102

aaggccaatgc acgtcacggc

20

<210> 103

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 103

gagggtcttc atgctgaagc

20

<210> 104

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 104

gttttcgctg cgggcagctt

20

<210> 105

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 105

gtttttccac ctttagatctg

20

<210> 106

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 106

tgagatgacc tgcagctgtt

20

<210> 107

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 107

caggccactc ctagcaccag

20

<210> 108

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 108

gatgacactg caggccactc

20

<210> 109

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 109

ccacacggcc cagtttcgca

20

<210> 110

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 110

ggcagatgc ctccagacat

20

<210> 111

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 111

tcggttgaca gggcagatgc

20

<210> 112

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 112

gggactcagc tgcacacctcc

20

<210> 113

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 113

cagatcagct ccatggcgca

20

<210> 114

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 114

cacctgcttg tataacctcat

20

<210> 115

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 115

gaagaggcct cggccatgga

20

<210> 116

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 116

ggctccccca cgacgggtggt

20

<210> 117

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 117

ggtcgggtgc tccagcttgg

20

<210> 118

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 118

agtctctgga aggccaaatt

20

<210> 119

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 119

ggctgggtca gttcacctcc

20

<210> 120

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 120

ctcccaggag ctggcacgcg

20

<210> 121

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 121

atgcactcaa gaactcggta

20

<210> 122

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 122

actgactctt cccttcttaa

20

<210> 123

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 123

acacactaga agtgagctta

20

<210> 124

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 124

cctccacctt gagcaggaca

20

<210> 125

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 125

caccaaggcc cataaaatatac

20

<210> 126

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 126

agaaaaccacc aaggccccata

20

<210> 127

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 127

gccagggcca agtgtctgtc

20

<210> 128

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 128

tggagtcact aaggactgcc

20

<210> 129

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 129

gggacatggc ctctgcctct

20

<210> 130

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 130

ggtacgagga acccgacctg

20

<210> 131

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 131

gccagctgtg ccctcagcct

20

<210> 132

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 132

ccaagccggg cagtccagat

20

<210> 133

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 133

gggttaggctc agattggaga

20

<210> 134

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 134

cggcacctgt gggacagccg

20

<210> 135

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 135

agagtgaaac cagccaacag

20

<210> 136

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 136

gctcaggagg atatgcgcc

20

<210> 137

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 137

aagcccttcc tcacaccaga

20

<210> 138

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 138

ggcacacctg tgaagagaag

20

<210> 139

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 139

tcctggaccc agtgtgctgc

20

<210> 140

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 140

cacacacgtg aggcttggtt

20

<210> 141

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 141

atacaaaaagt gtgacatggc

20

<210> 142

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 142

tccattttatt agtcttaggaa

20

<210> 143

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 143

cccaagaaag gtggcaggag

20

<210> 144

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 144

cgagactact ttcccatcca

20

<210> 145

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 145

ttcccatcca gctggtaag

20

<210> 146

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 146

atccagctgg tgaagacaca

20

<210> 147
<211> 20
<212> DNA
<213> H. sapiens

<220>

<400> 147
gctggtaag acacacaacc

20

<210> 148
<211> 20
<212> DNA
<213> H. sapiens

<220>

<400> 148
tgaagacaca caacctgctg

20

<210> 149
<211> 20
<212> DNA
<213> H. sapiens

<220>

<400> 149
acacacaacc tgctgaccac

20

<210> 150
<211> 20
<212> DNA
<213> H. sapiens

<220>

<400> 150

caacctgctg accaccagga

20

<210> 151

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 151

tgctgaccac caggaactat

20

<210> 152

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 152

accaccagga actatatctt

20

<210> 153

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 153

caggaactat atctttggat

20

<210> 154

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 154

actatatctt tggataccac

20

<210> 155

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 155

atcatgggcc tgggtgcctt

20

<210> 156

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 156

gagtaacctga tgtctggagg

20

<210> 157

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 157

aagaatggga gtggcaatgc

20

<210> 158

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 158

tgggagtggc aatgctatca

20

<210> 159

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 159

gtggcaatgc tatcatcatc

20

<210> 160

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 160

aatgctatca tcatcgtgg

20

<210> 161

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 161

ctgagctcca tgcctggcaa

20

<210> 162

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 162

tcctggggcc gatgggtcca

20

<210> 163

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 163

gggccgatgg gtccagaaga

20

<210> 164

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 164

gatgggtcca gaagaagttc

20

<210> 165

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 165

gtccagaaga agttccagaa

20

<210> 166

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 166

gacacacctggg ggctggtgcc

20

<210> 167

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 167

ctggggggctg gtgccctact

20

<210> 168

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 168

ggctggtgcc ctactccaag

20

<210> 169

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 169

ccatgtacat ggaggccctg

20

<210> 170

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 170

tacatggagg ccctggtgaa

20

<210> 171

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 171

ggaggccctg gtgaagctct

20

<210> 172

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 172

gtcatgggtg tctgtgggtt

20

<210> 173

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 173

gggtgtctgt gggttattta

20

<210> 174

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 174

tctgtgggtt atttaaaaga

20

<210> 175

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 175

tgaggaggat gctcttttgt

20

<210> 176

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 176

tggactgaag cattatagt

20

<210> 177

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 177

tcccatccag gtaaaagtgct

20

<210> 178

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 178

catctgcctc atttcactga

20

<210> 179

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 179

ttgatgtcac ctcttttag

20

<210> 180

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 180

tcccttccag agctgacctg

20

<210> 181

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 181

cccatggagg tccaggggaa

20

<210> 182

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 182

ggctgtttct ctcgcgcccc

20

<210> 183

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 183

gctctgcgcg aagccctggc

20

<210> 184

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 184

gcttcagcca tgaagacacct

20

<210> 185

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 185

gccgcctact ccggggtcct

20

<210> 186
<211> 20
<212> DNA
<213> H. sapiens

<220>

<400> 186
atctcagtgc tccagtggt

20

<210> 187
<211> 20
<212> DNA
<213> H. sapiens

<220>

<400> 187
gcagtcaccc tgcggAACCG

20

<210> 188
<211> 20
<212> DNA
<213> H. sapiens

<220>

<400> 188
aggtaactg agccagcctt

20

<210> 189
<211> 20
<212> DNA
<213> H. sapiens

<220>

<400> 189

agccttcggg gccaaactccc

20

<210> 190

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 190

aactccctgg aggaaccagc

20

<210> 191

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 191

tgctctgtaa atttggaaagt

20

<210> 192

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 192

gcttgccttg ttcttaggtgg

20

<210> 193

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 193

ttcttccctt cctgaagtga

20

<210> 194

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 194

agtcttccttg gggagaagg

20

<210> 195

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 195

tagtacttg gaccagttag

20

<210> 196

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 196

tagatgattc actttttgcc

20

<210> 197

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 197

agccacttct catacaagcc

20

<210> 198

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 198

acgctcggtct agtcctgaaa

20

<210> 199

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 199

ccttagtcact catatcgag

20

<210> 200

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 200

ggactggcct ccaggatgag

20

<210> 201

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 201

ggcctccagg atgaggatgg

20

<210> 202

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 202

gatgggggtg gcaatgacac

20

<210> 203

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 203

gccggccacca tgagcttaggt

20

<210> 204

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 204

agcttaggtgg agtaactgg

20

<210> 205

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 205

tttcttggtt ggctgatgac

20

<210> 206

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 206

tcaggccttgg cctggaggac

20

<210> 207

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 207

tggagcacat gcttactggt

20

<210> 208

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 208

acatgcttac tggcggcc

20

<210> 209

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 209

tactgggtggc ctcagtttac

20

<210> 210

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 210

ggggcctggc cttctgagca

20

<210> 211

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 211

agatttagttc caaaggcagg

20

<210> 212

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 212

gaacccaaggc ctcacttttc

20

<210> 213

<211> 20

<212> DNA

<213> H. sapiens

<220>

<400> 213

ttgcaccatg tcagactttt

20

<210> 214

<211> 20

<212> DNA

<213> M. musculus

<220>

<400> 214

cagctcccg agctcaggcg

20

<210> 215

<211> 20

<212> DNA

<213> M. musculus

<220>

<400> 215

tgcgaaaactg ggccgtgtgg

20

<210> 216

<211> 20

<212> DNA

<213> M. musculus

<220>

<400> 216

atgaggtata caagcaggta

20

<210> 217

<211> 20

<212> DNA

<213> M. musculus

<220>

<400> 217

tccatggccg aggccctttc

20

<210> 218
<211> 20
<212> DNA
<213> M. musculus

<220>

<400> 218
cgcgtgccag ctcctggag

20

<210> 219
<211> 20
<212> DNA
<213> M. musculus

<220>

<400> 219
taccgagttc ttgagtgcatt

20

<210> 220
<211> 20
<212> DNA
<213> M. musculus

<220>

<400> 220
ttaagaaggg aagagtcagt

20

<210> 221
<211> 20
<212> DNA
<213> M. musculus

<220>

<400> 221

taagctcact tctagtgtgt

20

<210> 222

<211> 20

<212> DNA

<213> M. musculus

<220>

<400> 222

tgtcctgctc aaggtggagg

20

<210> 223

<211> 20

<212> DNA

<213> M. musculus

<220>

<400> 223

gacagacact tggccctggc

20

<210> 224

<211> 20

<212> DNA

<213> M. musculus

<220>

<400> 224

ggcagtcctt agtgactcca

20

<210> 225
<211> 20
<212> DNA
<213> M. musculus

<220>

<400> 225
caggtcggtt tcctcgtaacc

20

<210> 226
<211> 20
<212> DNA
<213> M. musculus

<220>

<400> 226
tctccaatct gagcctaccc

20

<210> 227
<211> 20
<212> DNA
<213> M. musculus

<220>

<400> 227
tggcgcataat cctcctgagc

20

<210> 228
<211> 20
<212> DNA
<213> M. musculus

<220>

<400> 228

ttccttagact aataaatgga

20

<210> 229

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 229

ccttccttgc aggttcctcc

20

<210> 230

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 230

ctgcttagcctc tggatttga

20